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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,981	03/26/2004	David R. Adaskin	10030938-1	9631
22878 7590 07/31/2009 AGILENT TECHNOLOGIES INC. INTELLECTUAL PROPERTY ADMINISTRATION,LEGAL DEPT. MS BLDG. E P.O. BOX 7599 LOVELAND, CO 80537			EXAMINER GORDON, BRIAN R	
			ART UNIT 1797	PAPER NUMBER
			NOTIFICATION DATE 07/31/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

IPOPS.LEGAL@agilent.com

Office Action Summary	Application No. 10/809,981	Applicant(s) ADASKIN ET AL.	
	Examiner Brian R. Gordon	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1-9-09.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-17 and 21-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-17 and 21-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed January 15, 2009 have been fully considered but they are not persuasive.

Applicant asserts Schchegorva does not disclose a printhead assembly 100 that corresponds to the sum of all printheads on a writer. The examiner has addressed this issue in the Previous Office Actions. As previously stated the examiner disagrees. The claim only requires selecting at least one printhead assembly comprising multiple printheads and each printhead includes nozzle orifices. Applicant further relies upon paragraph 45 and points out "The Assembly 100 corresponds to the sum of all printheads on a writer". It should be noted that the sentence is specifically directed to a specific embodiment and moreso specifically the Assembly 100. On the other hand, claim 1 is broadly directed to a printhead assembly comprising multiple printheads. Therefore the claimed "printhead assembly" only requires the presence multiple single printheads not a sum of printheads on a writer as described in relationship to Assembly 100. There is no specific structural requirements of the claimed assembly other than multiple printheads. Furthermore, there are no specific structural requirements given to define a single "printhead". Therefore any structure including multiple dispensing devices may be considered equivalent to a printhead assembly as claimed. Furthermore, there is no "sum" requirement in the claims. Also it is unclear how one can have a sum of all printheads. If one selects a printhead assembly including multiple printheads, Then inherently the selected printhead assembly includes all of the

printheads. Therefore it is unclear how a sum is distinction in this case, even though the argument is not commensurate in scope with that of the claims. Furthermore there is no reference to a "writer" and its structural requirements in the claims. If applicant intends for the structure to be limited to the that of paragraph 45, then applicant should amend the claims to clearly reflect such.

It should further be noted that the drawing of the instant invention shown in figure 1 appears to be identical to that as shown in the drawings of figure 9 of Shchegrova. In fact, the reference same reference numbers and terms are employed. The reference numeral 100 is used to referred to as the transporter and elements 210, 210a, 210b are referred to as head system and heads, respectively. Clearly the structures are equivalent.

Applicant has further amended the claim to modify the selection data to specify "the type". However it should be noted that Shchegrova discloses use or selection of piezoelectric heads (paragraphs 0002, 0025, and 0047).

Shchegrova further discloses the frame selection may be based upon the number of non-error dispensers which is equivalent to the number of printheads. (paragraph 0043). The reference further discloses number of dispenser and rows and columns of the heads 210a and b may be selected. (paragraph 0034).

In view of such, the previous rejection is hereby maintained.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 6, 8, and are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Considering how the claims have been amended the claim now reads as if each classification of data in the list refers to the type of each of said printheads. The claim should be further amended to clarify such. One such solution would be to place the wherein clause at end of the list.

It is unclear how a type of nozzle plate and alignment of nozzle plate can be data when the claim does not previously establish that the printheads comprise nozzle plates. Furthermore it is unclear how data can be related to wells when it has not been established that the printheads or printhead assembly comprises a well or wells. Furthermore it is unclear how data can be associated with nozzle rows when it has not been established that the device includes nozzle rows. Before any such data can be selected it must first be established that the device has the structure to provide for such a selection.

Claim 8, is a conditional limitation that only occurs under a condition indicated by the term "when". If the condition doesn't occur the step of claim 8 does not occur. It is unclear what is meant by "electronic media associated with said printhead". The method does not provide any steps of providing for such media. Furthermore it is unclear what constitutes "associated with". Does the printhead assembly comprise electronic media? What is the structural relationship or the media to the printhead assembly? It is unclear what is being reference by the phrase "said system". The only system mentioned is that

of the preamble. It is unclear how such media can be plugged into the system when claim 6 is directed to preparing an array production system. The structure of the system has not been previously provided or defined. As such how can media be plugged therein and where is it plugged in at?

Claim 22, does not further limit the structure of the assembly. Applicant has claimed the device as having multiple printhead groups. However, the claim does define what structurally defines a group. One can label multiple nozzles or printheads as one choose and refer to them as a group. Furthermore the "which can" portion of the claim is directed to intended use for it describes what one can optionally do with the device rather than any structural requirement or any recitation of a positive step.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 1-10, 12-17, and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Shchegrova et al. US 2003/0143329.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Shchegrova et al. discloses a method, apparatus, and computer program products useful in fabricating a chemical biopolymer arrays. The apparatus may include a head system, transport system, and a processor. The head system has multiple groups of drop dispensers. The transport system moves the head system with respect to a substrate. The processor dispenses drops from dispensers during operation of the transport system, in a pattern along a selected path for each group (abstract).

Biopolymers are typically found in biological systems and particularly include polysaccharides (such as carbohydrates), and peptides (which term is used to include polypeptides, and proteins whether or not attached to a polysaccharide) and polynucleotides as well as their analogs such as those compounds composed of or containing amino acid analogs or non-amino acid groups, or nucleotide analogs or non-nucleotide groups. [0024]

As described in Figure 8 the process includes a step of choosing a frame with the most non-error dispensers (830) from among the available frames. It will be appreciated that any criteria other than middle dispensers, could be used for selecting a first set from among those frames which equally qualify as having the most non-error dispensers. All of the frames selected to this point may then be examined (860) to see if each set has a working dispenser in at least one frame. Since frame Y was selected as the first frame and it has an error dispenser D_{y10} , this is not true. Therefore, a frame is selected (870) from among remaining frames which has the highest number of non-error dispensers in sets not containing a non-error dispenser in previously selected

frame (selecting printheads based on type and number of dispensers). At this point, the previously non-selected frames are W, X, and Z. [0042]

In a further step a best non-error dispenser is then selected (890) from among the Y and X frame dispensers in each of the foregoing sets using the pre-loaded into a memory 141 or manually entered by an operator criteria based on any one or more of size, location, or shape of a deposited drop, and the result stored in a memory (such as memory 141 in FIG. 9). [0044]

Operator input device 312 may, for example, be a keyboard, mouse, or the like. Processor 140 has access to a memory 141, and controls print head system 210 (specifically, the activation of the ejectors therein), operation of the transport system, operation of each jet in print head system 210, capture and evaluation of images from the camera 304, and operation display 310 and speaker 314. Memory 141 may be any suitable device in which processor 140 can store and retrieve data, such as magnetic, optical, or solid state storage devices (including magnetic or optical disks or tape or RAM, or any other suitable device, either fixed or portable). Processor 140 may include a general purpose digital microprocessor suitably programmed from a computer readable medium carrying necessary program code, to execute all of the functions required of it as described below. It will be appreciated though, that when a "processor" such as processor 140 is referenced throughout this application, that such includes any hardware and/or software combination which will perform the required functions. Suitable programming can be provided remotely to processor 140, or previously saved in a computer program product such as memory 141 or some other portable or fixed

computer readable storage medium using any of those devices mentioned below in connection with memory 141. For example, a magnetic or optical disk 324 may carry the programming, and can be read by disk reader 326. [0049]

Arrays may be read by any other method or apparatus than the foregoing, with other reading methods including other optical techniques (for example, detecting chemiluminescent or electroluminescent labels) or electrical techniques (where each feature is provided with an electrode to detect hybridization at that feature). Results from the reading may be raw results (such as fluorescence intensity readings for each feature in one or more color channels) or may be processed results such as obtained by rejecting a reading for a feature which is below a predetermined threshold and/or forming conclusions based on the pattern read from the array (such as whether or not a particular target sequence may have been present in the sample, or whether or not a pattern indicates a particular condition of an organism from which the sample came). The results of the reading (processed or not) may be forwarded (such as by communication) to a remote location if desired, and received there for further use (such as further processing). [0056]

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-10, 12-17, and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schchegorva.

In the event applicant asserts claims 1-10, 12-17, and 21-22 can alternatively be rejected along with claims 23-26.

The claims seem to suggest that the selection of the printhead-related data allows for alteration of the printhead to meet the entered requirements. However in actuality it appears that data is nothing more than criteria provided that is specific to one

or more models of printheads and one can narrow the group or select a specific model the meets the selected criteria.

As specified by applicant data can be provided for simply by model or serial numbers.

Schchegorva discloses that various dispensing and head systems are known and may be used in the device. As such when one selects a specify model of such a system one is obviously selecting the printhead-related data as defined by applicant.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Appoldt, Yvonne et al.; Shumate, Christopher Bentley et al.; and Montagu; Jean I. discloses automated devices and methods for dispensers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is 571-272-1258. The examiner can normally be reached on M-F, 1st Fri. Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian R Gordon/
Primary Examiner
Art Unit 1797